

REMARKS

Claims 1, 2 and 4-10 are all the claims pending in the application. Claim 1 has been amended to define the halogen-free resin as a polyether ether ketone resin.

Entry of the above amendment is respectfully requested.

I. Response to Rejection of Claims 1-2, 4-5, 7 and 9-10 under 35 U.S.C. § 102(b)

Claims 1-2, 4-5, 7, and 9-10 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Fukuzawa et al. (US 5,755,261).

Applicants respectfully traverse the rejection.

Claim 1 recites an apparatus for feeding a high-purity ammonia gas, comprising an ammonia gas flow path and a sealing part and/or a gas contacting part, which is in the ammonia gas flow path and comprise a halogen-free polyether ether ketone resin.

Fukuzawa does not disclose "an ammonia gas flow path" or the use of "a polyether ether ketone resin." Thus, Fukuzawa does not disclose every element as recited in claim 1.

In addition, Fukuzawa only discloses a valve assembly, which is used in a water faucet or the like and has an excellent water stopping property. That is, Fukuzawa only discloses an apparatus for handling a liquid, and neither teaches nor suggests an apparatus for handling a gas. Further, Fukuzawa neither teaches nor suggests a problem of corrosion due to ammonia gas.

For at least the foregoing reasons, it is submitted that Fukuzawa does not anticipate claim 1 or the claims depending therefrom.

Accordingly, it is submitted that claims 1-2, 4-5, 7 and 9-10 are patentable over Fukuzawa and withdrawal of the rejection is respectfully requested.

II. Response to Rejection of Claims 1-2, 4-5, 7 and 9-10 under 35 U.S.C. § 103(a)

Claims 1-2, 4-5, 7, and 9-10 are rejected under 35 U.S.C. §103(a) as allegedly being

unpatentable over Fukuzawa et al. in view of Kimura et al. (US 2003/0162870).

Applicants respectfully traverse the rejection.

As described above, Fukuzawa discloses an apparatus for handling a liquid, but neither teaches nor suggests the technical features (for example, an ammonia gas flow path and a polyether ether ketone resin as recited in claim 1) of the present invention or the problems (for example the corrosion due to ammonia gas) resolved by the present invention.

In addition, Kimura does not make up for the deficiencies of Fukuzawa. Kimura discloses a flame-retardant resin composition including a polyolefin resin such as a polyethylene resin. However, Kimura only disclose that the flame-retardant resin composition is useful as housing materials in electric and electronic fields and as substitutes for metallic parts of automobiles. *See* [0002] and [0061]. Kimura does not disclose or suggest a sealing material in the gas flow path as the use of the flame retardant resin composition.

In addition, Kimura does not disclose the use of a polyether ether ketone resin.

Accordingly, it is submitted that there is no motivation for one of ordinary skill in the art to combine Fukuzawa with Kimura. In addition, it is submitted that even if Fukuzawa were somehow combined with Kimura, the claimed invention would not be achieved.

For at least the foregoing reasons, it is submitted that claim 1 is not rendered obvious by the cited art.

Accordingly, it is submitted that claims 1-2, 4-5, 7 and 9-10 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

III. Response to Rejection of Claims 5-9 under 35 U.S.C. § 103(a)

Claims 5-9 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fukuzawa et al. (US 5,755,261) in view of Borland (US 5,474,105).

Applicants respectfully traverse the rejection.

Claims 5-9 depend from claim 1, and thus it is submitted that these claims are patentable for at least the same reasons as claim 1.

That is, as described above, Fukuzawa discloses an apparatus for handling a liquid, but does not teach or suggest the technical features (for example an ammonia gas flow path and a polyether ether ketone resin, as recited in claim 1) of the present invention or the problems (for example the corrosion due to ammonia gas) resolved by the present invention.

Borland does not make up for the deficiencies of Fukuzawa. Borland discloses a valve assembly for handling a compressed natural gas. However, Borland does not disclose handling an ammonia gas having a corrosion property or the problems associated therewith. Borland also does not teach or suggest an ammonia gas flow path or the use of a polyether ketone resin.

Thus, it is submitted that there is no motivation for combining Fukuzawa, which teaches an apparatus for handling a liquid, with Borland, which teaches an apparatus for handling a gas, to arrive at the claimed invention. Even if Fukuzawa were somehow combined with Borland, it is submitted that one of ordinary skill in the art would not arrive at the claimed invention.

For at least the foregoing reasons, it is submitted that claim 5 is not rendered obvious by the cited art.

Accordingly, it is submitted that claims 5-9 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

IV. Response to Rejection of Claims 1-2 and 4-10 under 35 U.S.C. § 103(a)

Claims 1-2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland et al. US 5,474,104 in view of Kimura et al. (US 2003/0162870).

Applicants respectfully traverse the rejection.

As described above, Borland discloses a valve assembly for handling a compressed natural gas, but fails to teach or suggest the technical features (for example an ammonia gas flow path and a polyether ether ketone resin, as recited in claim 1) of the present invention or the problems (for example the corrosion due to ammonia gas) resolved by the present invention.

In addition, as discussed above, Kimura does not teach or suggest a sealing material in the gas flow path as the use of the flame-retardant resin composition. In addition, Kimura does not disclose the use of a polyether ether ketone resin.

Therefore, it is submitted that there is no motivation for one of ordinary skill in the art to combine Borland with Kimura. In addition, even if Borland were somehow combined with Kimura, it is submitted that the claimed invention would not be achieved because Kimura does not make up for the deficiencies of Borland.

For at least the foregoing reasons, it is submitted that claim 1 is not rendered obvious by the cited art.

Accordingly, it is submitted that claims 1-2 and 4-10 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

V. Response to Rejection of Claims 1-2, 4-7 and 9-10 under 35 U.S.C. § 103(a)

Claims 1-2, 4-7 and 9-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Beaver et al. (US 5,149,105) in view of Kimura et al. (US 2003/0162870).

Applicants respectfully traverse the rejection.

The present invention was achieved on the basis the particular property of ammonia gas that a dehalogenation reaction takes place on contacting with a fluororesin.

Beaver discloses halogen gases, halogen compounds, H₂SO₄, NaOH and the like as corrosive or hazardous fluids which are targets for sealing a port of a vessel, but does not

disclose the use of an ammonia gas. The corrosive or hazardous fluids of Beaver are very different from ammonia gas. Therefore, Beaver does not teach or suggest the technical features (for example an ammonia gas flow path and a polyether ether ketone resin, as recited in claim 1) of the present invention or the problems (for example the corrosion due to ammonia gas) resolved by the present invention.

As discussed above, Kimura neither teaches nor suggests a sealing material in the gas flow path as the use of the flame-retardant resin composition. In addition, Kimura et al don't disclose a polyether ether ketone resin.

Accordingly, it is submitted that there is no motivation for one of ordinary skill in the art to combine Beaver with Kimura. In addition, even if Beaver were somehow combined with Kimura, the claimed invention would not be achieved because Kimura does not make up for the deficiencies of Beaver.

For at least the foregoing reasons, it is submitted that claim 1 is not rendered obvious by the cited art.

Accordingly, it is submitted that claims 1-2, 4-7 and 9-10 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

VI. Response to Rejection of Claim 8 under 35 U.S.C. § 103(a)

Claim 8 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Beaver et al. (US 5,149,105) in view of Kimura et al. and Borland et al.

Applicants respectfully traverse the rejection.

Claim 8 depends from claim 1, and thus it is submitted that it is patentable for at least the same reasons as claim 1.

In addition, for the reasons discussed above, it is submitted that there is no motivation for one of ordinary skill in the art to combine Beaver, Kimura and Borland. In addition, even if

the references were somehow combined, the claimed invention would not be achieved because the none of the references teaches or suggests the technical features (for example an ammonia gas flow path and a polyether ether ketone resin, as recited in claim 1) of the present invention or the problems (for example the corrosion due to ammonia gas) resolved by the present invention.

Thus, it is submitted that claim 8 is patentable over the cited art and withdrawal of the rejection is respectfully requested.

VII. Response to Rejection of Claims 1-2, 4-5, 7 and 9-10 under 35 U.S.C. § 103(a)

Claims 1-2, 4-5, 7 and 9-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fukuzawa et al. in view of Floh et al. (US 2004/0045605).

Applicants respectfully traverse the rejection.

As discussed above, Fukuzawa does not teach or suggest an apparatus for handling a gas. In addition, Fukuzawa fails to teach or suggest the technical features (for example an ammonia gas flow path and a polyether ether ketone resin, as recited in claim 1) of the present invention or the problems (for example the corrosion due to ammonia gas) resolved by the present invention.

In addition, Floh fails to make up for the deficiencies of Fukuzawa. Floh disclose a valve assembly for placement in a fluid conduit and an ammonia gas as the fluid. However, Floh does not disclose the use of a halogen-free resin, particularly a polyether ether ketone resin, as the material of the valve assembly. In addition, Floh neither teaches nor suggests the problem (the corrosion due to ammonia gas) of the present invention.

Therefore, even if Fukuzawa were somehow combined with Floh, it is submitted that the claimed invention would not be achieved.

For at least the foregoing reasons, it is submitted that claim 1 is not rendered obvious

by the cited art.

Accordingly, it is submitted that claims 1-2, 4-5, 7 and 9 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

VIII. Response to Rejection of Claims 1-2, 4-5, 7 and 9-10 under 35 U.S.C. § 103(a)

Claims 1-2, 4-5, 7 and 9-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fukuzawa et al. in view of Kimura et al. and Floh et al. (US 2004/0045605).

Applicants respectfully traverse the rejection.

For the reasons discussed above, it is submitted that even if Fukuzawa were somehow combined with Floh, the claimed invention would not be achieved.

In addition, as discussed above, Kimura does not teach or suggest a sealing material in the gas flow path as the use of the flame-retardant resin composition. Furthermore, Kimura does not disclose the use of a polyether ether ketone resin.

Accordingly, it is submitted that there is no motivation for one of ordinary skill in the art to combine the cited art. Even if the references were somehow combined, it is submitted that the claimed invention would not be achieved because Floh and Kimura do not make up for the deficiencies of Fukuzawa.

For at least the foregoing reasons, it is submitted that claim 1 is not rendered obvious by the cited art.

Accordingly, it is submitted that claims 1-2, 4-5, 7 and 9-10 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

IX. Response to Rejection of Claims 5-9 under 35 U.S.C. § 103(a)

Claims 5-9 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fukuzawa et al. in view of Borland and Floh et al. (US 2004/0045605).

Applicants respectfully traverse the rejection.

Claims 5-9 depend from claim 1, and thus it is submitted that these claims are patentable for at least the same reasons as claim 1.

In addition, for the reasons discussed above, it is submitted that there is no motivation for one of ordinary skill in the art to combine Fukuzawa, which teaches an apparatus for handling a liquid, with Borland, which teaches an apparatus for handling a gas. In addition, even if the references were somehow combined, it is submitted that the claimed invention would not be achieved because Borland and Floh do not make up for the deficiencies of Fukuzawa.

For at least the foregoing reasons, it is submitted that claim 5 is not rendered obvious by the cited art.

Accordingly, it is submitted that claims 5-9 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

X. Response to Rejection of Claims 1-2 and 4-10 under 35 U.S.C. § 103(a)

Claims 1-2 and 4-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Borland et al. (US 5,474,104) in view of Kimura et al. (US 2003/0162870) in view of Floh et al. (US 2004/0045605).

Applicants respectfully traverse the rejection.

For the reasons discussed above, it is submitted that there is no motivation for combining the cited art, and even if there were some motivation, the combination would not result in the claimed invention because Kimura and Floh do not make up for the deficiencies of Borland.

Accordingly, it is submitted that claims 1-2 and 4-10 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

XI. Response to Rejection of Claims 1-2, 4-7, and 9-10 under 35 U.S.C. § 103(a)

Claims 1-2, 4-7, and 9-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Beaver et al. in view of Kimura et al. (US 2003/0162870) in view of Floh et al. (US 2004/0045605).

Applicants respectfully traverse the rejection.

For the reasons discussed above, it is submitted that there is no motivation for combining the cited art, and even if there were some motivation, the combination would not result in the claimed invention because Kimura and Floh do not make up for the deficiencies of Beaver.

Accordingly, it is submitted that claims 1-2, 4-7 and 9-10 are patentable over the cited art and withdrawal of the rejection is respectfully requested.

XII. Response to Rejection of Claim 8 under 35 U.S.C. § 103(a)

Claim 8 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Beaver et al. (US 5,149,105) in view of Kimura et al., Borland et al., and Floh et al.

Applicants respectfully traverse the rejection.

Claim 8 depends from claim 1, and thus it is submitted that it is patentable for at least the same reasons as claim 1.

For the reasons discussed above, it is submitted that there is no motivation for combining the cited art, and even if there were some motivation, the combination would not result in the claimed invention because Kimura, Borland and Floh do not make up for the deficiencies of Beaver.

Accordingly, it is submitted that claim 8 is patentable over the cited art and withdrawal of the rejection is respectfully requested.

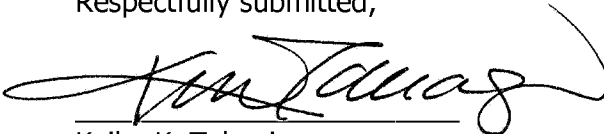
XIII. Conclusion

In view of the above, reconsideration and allowance of claims 1-2 and 4-10 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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